

BLUEPRINT FOR ACTION

Workshop on the Design of the


National Network for Manufacturing Innovation

Institute Structure and Governance

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There has long been a school of thought that members of a board constitute a resource. Through their personal networks, directors can help the company establish contact with new customers or partners, tap into new sources of capital, or gain a foothold in new markets or technologies.

Blueprint for Action: Institute Structure and Governance Outline

- NNMI RFI and Workshop Responses
- Design Review: Preliminary Design as discussed in the NSTC NNMI Report
- Café Period Topic Discussion Questions



Gesellschaft

y Board → Directors
representatives of
e

ific and
al Advisory
board

Technology

Presidential Council → EB,
Chairmen of 6 of the 7
alliances

S&T Advisory Board → Directors
and elected representatives of
each Institute

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graph TD
    AM[Assembly of Members] -- elects --> S[Senate]
    S -- appoints --> EB[Executive Board]
    EB -- discharges --> S
    EB --- GS[Group Spokesmen]
    EB --- PC[Presidential Council]
    STAB[Scientific and Technical Advisory Board] -- advises --> EB
    EB -- advises --> FI[60 Fraunhofer Institutes]
    EB -- advises --> G[7 Groups]
    AB[Advisory Boards] -- advises --> FI
  
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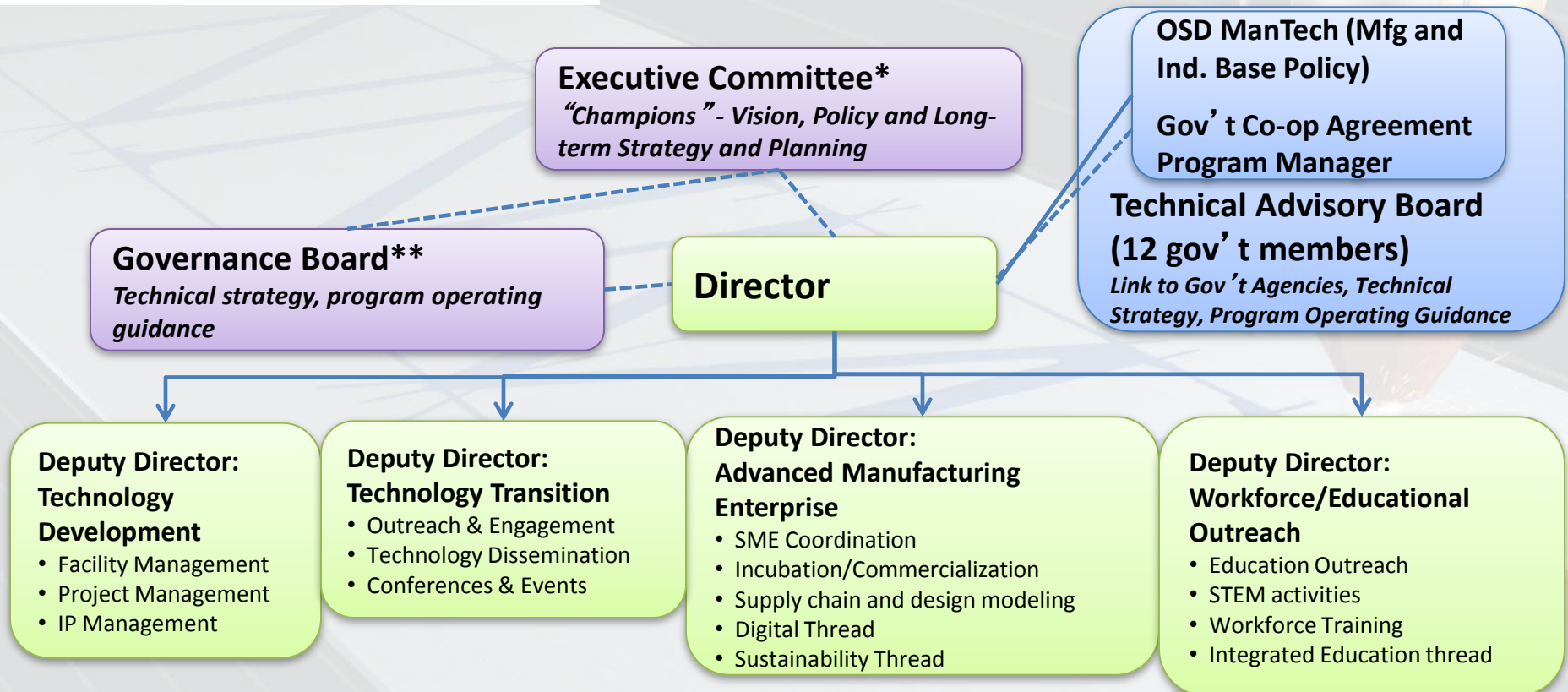
The diagram illustrates the organizational structure of Fraunhofer AG. At the top, the **Assembly of Members** elects the **Senate**. The **Senate** appoints the **Executive Board**, which in turn discharges the **Senate**. The **Executive Board** is supported by the **Group Spokesmen** and the **Presidential Council**. The **Scientific and Technical Advisory Board** advises the **Executive Board**. The **Executive Board** oversees the **60 Fraunhofer Institutes** and the **7 Groups**. The **Advisory Boards** also advise the **60 Fraunhofer Institutes**.

60 Fraunhofer Institutes

7 Groups:

- Information and Communication Technology
- Life Sciences
- Microelectronics
- Light & Surfaces
- Production
- Materials and Components MATERIALS
- Defense and Security

NAMII Institute Structure and Governance



— = Direct
Oversight/Responsibility
- - - = Guidance / Direction

***Executive Committee (11):** Industry, for-profit organization (2), Non-profit association (2), Academic (2), Government (3), At-large (2)

****Governance Board:** All 1st and 2nd Tier Members, small business, MEP director members, states ex-officio

NAMII Institute Structure and Governance



- NAMII has a working DRAFT Operating Plan that defines the procedures and policies of NAMII and describes the shared leadership
 - Guidance and direction from GB, EC, the TAB
- After government Period of Performance the TAB and Government PM will cease to participate directly in the leadership of NAMII
 - Those responsibilities will be assumed by the GB, EC, and/or NAMII Director
- The government representatives will remain on EC after conclusion of government Period of Performance



NAMII Institute Structure and Governance



- Tier 1: Full Member (\$200,000 annual, CASH or CASH Equivalent)
- Tier 2: Lead Member (\$50,000 annual, cash or cost share)
- Tier 3: Supporting Member (\$15,000 annual, cash or cost share)



Request For Information

- 1.) What business models would be effective for the Institutes to manage business decisions?
- 2.) What governance models would be effective for the Institutes to manage governance decisions?
- 3.) What membership and participation structure would be effective for the Institutes, such as financial and intellectual property obligations, access, and licensing?
- 4.) How should a network of Institutes optimally operate?
- 5.) What measures could assess effectiveness of Network structure and governance?



Request For Information

- Over 50 responses submitted that directly addressed institute structure and governance
- Respondents were a mixture of industry, academia, individual citizens, and alliances
- Responses ranged from management and executive boards to staffing to IP structure and governance

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RFI I&S Question 1

What governance models would be effective for the Institutes to manage governance decisions?



Request For Information (Responses to Q1)

- Create a non-for-profit entity that acts as the recipient and manager of federal and leveraged funds.
- Each institute would have a “semi-autonomous” structure.
- Business model: precompetitive/collaborative environment, open access to tools/tech, etc. either fee based or membership based, annual fee with sliding scale costs, financial and business accountability with leadership and an Executive Committee.
- Business model should be a consortium (collaborative effort leveraging resources by combining public and private resources to expand program scope, investigate technology options, and produce higher quality solutions).
- Simple and streamlined business and governance models- determined at regional level. Recommend each institute has a board with fiduciary responsibility and business AND technology advisory group. However, management is not required to take advice from the boards.



RFI I&S Question 2

What governance models would be effective for the Institutes to manage governance decisions?



Request For Information (Responses to Q2)

- A Board of Directors for the IMI must include representation from all stakeholder groups
 - Governance should be provided by a Board of Directors which appoints a President and CEO, who is responsible for implementing a management structure and for day-to-day operations. Institutes should not be operated by a universities, national labs, or governmental entities.
 - Cannot be overly influenced by one group, company, or person
- Technology advisory groups acting as “circles of excellence” in relevant technology areas should be established to give advice on program objectives, project selection, and progress reviews.
- The Federal funding agency should avoid too much involvement in the management of the Institute. It should take a hands-off approach regarding day-to-day and month-to-month decisions.
 - Should not have government organizations making the decisions or calling the shots



RFI I&S Question 3

What membership and participation structure would be effective for the Institutes, such as financial and intellectual property obligations, access, and licensing?



Request For Information (Responses to Q3)

- Membership should be on a “pay-to-play” basis, with members joining because they see value in membership
- Joint investment, joint involvement, and joint governance must address the culture and practices of the academic institution, private business/industry, and government at all levels for the Institute to have an impact regionally on jobs as well as nationally and globally in terms of technology innovation and deployment.
- Issues such as partial ownership of the new technology or conflicts of interest are really thorny, but will have to be worked and well known by the Institute stakeholders.
 - Three IP scenarios: Institute Member IP, Company Protected IP, Public Domain, Open Source IP



RFI I&S Question 4

How should a network of Institutes optimally operate?



Request For Information (Responses to Q4)

- Each Institute should function as a stand-alone center. The National Network should be a loose confederation sharing good practices, with minimal oversight and governance from the National Network.
- The cost of operation of the network should be shared by each of the Institutes. Both the network and the individual Institutes must be provided the flexibility to modify the governance structure and business model as the network gains operational experience.
- There should be frequent sharing of information and lessons learned. Interaction should foster “innovation at the margins” recognizing that institutes have similar missions and objectives with common stakeholders at the national level.
- The heads of each Institute should meet regularly to coordinate joint activities.



RFI I&S Question 5

What measures could assess effectiveness of Network structure and governance?



Request For Information (Responses to Q5)

- Since the National Network should exist to help individual Institutes perform more effectively, the best measures would relate to the extent to which good practices are shared and adopted by multiple Institutes across the Network.
- Measures of network structure should mirror measures of effectiveness at the institute level, and might also include:
 - Number and quality of interactions between and among institutes
 - Diffusion of lessons and innovative approaches across institutes
- To assess the network structure and governance, the following measures are suggested:
 - Number of institutes complying with centralized governance
 - Revenues of a centralized institute from industry participants
 - Number of patents / IP filed by all institutes
- The effectiveness of the Network's governance will be demonstrated when Institutes need to be added or removed, especially after the three-year initial government investment is completed.

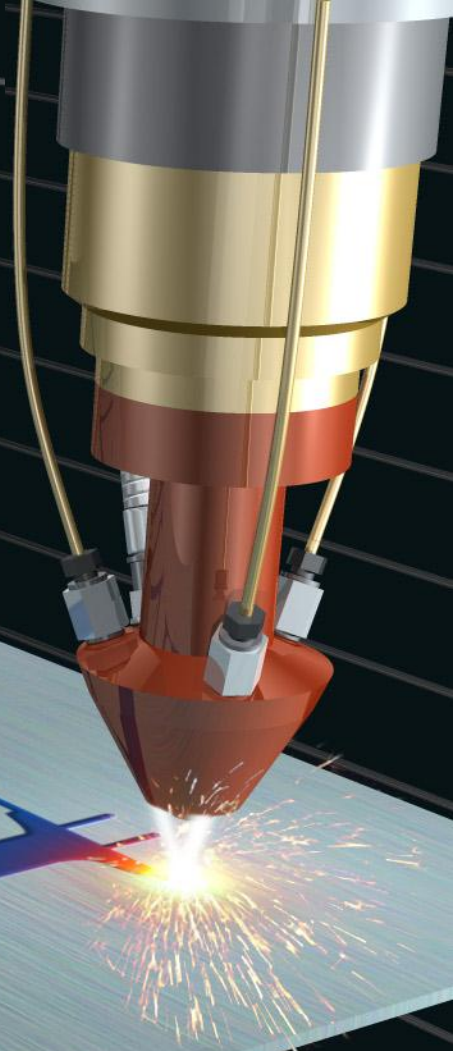


BLUEPRINT FOR ACTION

Workshop on the Design of the

National Network for Manufacturing Innovation

National Network for Manufacturing Innovation: A Preliminary Design



Preliminary NNMI Design Tenets

- ✧ Tenet 1- Independent not- for- profit organization
- ✧ Tenet 2 - Each institute should have an independent fiduciary Board of Directors, predominantly composed of industry representatives.
- ✧ Tenet 3- An Institute leader such as an Executive Director should be in charge of day-to-day operations
- ✧ Tenet 4 - Each Institute should have substantial autonomy from its partner organizations.
 - Decisions related to operations, membership, intellectual property, capital investments, project selection, funding allocation, and progress toward sustainability. Draft Institute membership and governance agreements should be included within proposals.



Preliminary NNMI Design Tenets

- Tenet 5 – The three key stakeholders of NNMI (industry, academia, and government) will need to have their interest preserved in a joint governance model.
- Tenet 6- Partners in the Institute should include the full range of national, State, and local stakeholders ; manufacturing enterprises of all sizes including startups ; institutions of higher education including both research universities and community colleges ; research organizations (FFRC); national laboratories or government agencies; career and technical institutions; State, regional, and local public and private entities that support industrial clusters and associated economic development partnerships; unions; professional and industry associations; other not-for-profit organizations; and the general public



Preliminary NNMI Design Tenets

- Tenet 7 -The Institutes should work collaboratively, sharing resources, best practices, and research and development results. They should transparently share funding and membership models, annual reports, and projections.
 - The NNMI will organize a Network Leadership Council composed of representatives of the Institutes, Federal agencies, and other appropriate entities. The Network Leadership Council will actively look for opportunities to leverage existing resources between Institutes.



Institute Structure and Governance Café Topics

- 1) The NNMI preliminary design calls for an Institute to be led by an independent, not-for-profit organization. How then should an Institute leverage academic and regional resources, interface effectively with these and other key stakeholders, and manage intellectual property obligations?
- 2) How should participation by non-domestic organizations be managed to maximize impact to the United States? For example, how might an Institute manage participation by a multi-national organization? Should a non-domestic organization participate in or lead a project?

Café Period I – Design Characteristics 2 Agency Leads

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